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EXAMINER

MANCHO, RONNIE M

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/719,890	<b>Applicant(s)</b> PODSHIVALOV ET AL.	
	<b>Examiner</b> RONNIE MANCHO	<b>Art Unit</b> 3664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,4-7,8, 910,11,14-17, 18, 19 and 20-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-7,10,11,14-17 and 20-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/09; 12/05; 11/03</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/24/10 has been entered.

### ***Election/Restrictions***

2. Applicant's election without traverse of figs. 1, 3, 6 which apply to claims 1, 4-7, 10, 11, 14-17, 20-28 in the reply filed on 2/24/10 is acknowledged.

3. Claims 8, 9, 18, 19 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected embodiment, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 2/14/10.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an

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international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 4-7, 10, 11, 14-17, 20-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Van Diggelen et al (6813560).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

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Regarding claim 1, Van Diggelen et al (abstract, figs. 1, 5; col. 3, lines 1-col. 4, lines 47; col. 5, lines 20-col. 6, lines 47; col. 7, lines 26-28) discloses a method of distributing satellite navigation data, comprising:

processing satellite signals at each of a plurality of reference stations (104<sub>1</sub>, 104<sub>2</sub>, 104<sub>3</sub>, etc; col. 3, lines 31-65) to receive a respective plurality of satellite navigation data streams (ephemeris, col. 3, lines 31-40);

forming packets (col. 3, lines 38-40; col. 4, lines 16-23) in response to said plurality of satellite navigation data streams to generate a plurality of packetized satellite navigation data streams;

sending each of said plurality of packetized satellite navigation data streams to a processing system 108 (col. 3, lines 41-46; col. 5, lines 29-33);

removing (col. 3, lines 41-46), at said processing system, duplicate packets within said plurality of packetized satellite navigation data streams to generate a combined (providing of latest ephemeris for redistribution over the internet i.e. using internet protocol inherently involves generation and combination of packets of data for distribution or transmission; col. 3, lines 41-46; col. 4, lines 16-47; col. 5, lines 29-34; col. 6, lines 15-47) packet stream;

sending said combined packet stream into a communication network (col. 4, lines 24-39; col. 6, lines 15-47);

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decoding satellite navigation data within said combined packet stream to generate at least one of ephemeris data, almanac data, ionosphere data, universal time offset data, satellite health data, and raw data bits, wherein said decoding occurs after removing duplicate packets (abstract, figs. 1, 5; col. 3, lines 1-col. 4, lines 47; col. 5, lines 20-col. 6, lines 47; col. 7, lines 26-28).

*That is ephemeris data and other data are first transmitted as a stream of packets by the satellites to the reference stations. After receiving the transmitted packets, the reference stations each combines its own received packets in internet format (i.e. use IP or the internet communication technology) to forward or transmit the packets to a processing system. The processing system removes duplicate packets from the packets forwarded by the reference stations to provide latest ephemeris data. That is, the processing station after removing duplicate packets decodes the received packets to provide ephemeris data. The decoded ephemeris data are further combined as another packet stream using IP or the internet communication technology for transmission to mobile receivers. The mobile receivers use ephemeris data transmitted by the processing system to aid the mobile receivers.*

Regarding claim 4, Van Diggelen et al (abstract, figs. 1, 5; col. 3, lines 1-col. 4, lines 47; col. 5, lines 20-col. 6, lines 47; col. 7, lines 26-28) disclose the method

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of claim 1, wherein said plurality of satellite navigation data streams comprises global positioning system (GPS) satellite navigation messages, and wherein each of said packets includes a sub-frame of said GPS satellite navigation messages.

Regarding claim 5, Van Diggelen et al (abstract, figs. 1, 5; col. 3, lines 1-col. 4, lines 47; col. 5, lines 20-col. 6, lines 47; col. 7, lines 26-28) disclose the method of claim 4, wherein each of said packets includes a header having a satellite identifier and a time-of-week (TOW) value.

Regarding claim 6, Van Diggelen et al (abstract, figs. 1, 5; col. 3, lines 1-col. 4, lines 47; col. 5, lines 20-col. 6, lines 47; col. 7, lines 26-28) disclose the method of claim 5, wherein each of said duplicate packets is removed in response to said satellite identifier and said TOW value associated therewith.

Regarding claim 7, Van Diggelen et al (abstract, figs. 1, 5; col. 3, lines 1-col. 4, lines 47; col. 5, lines 20-col. 6, lines 47; col. 7, lines 26-28) disclose the method of claim 1, wherein said processing system comprises a hub, and the method further comprises: receiving said combined packet stream from said communication network at a position location server.

Regarding claim 10, Van Diggelen et al (abstract, figs. 1, 5; col. 3, lines 1-col. 4, lines 47; col. 5, lines 20-col. 6, lines 47; col. 7, lines 26-28) disclose the method of claim 9, wherein said at least one additional packetized satellite

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navigation data stream is generated by at least one of an additional hub and a reference station disposed proximate to said position location server (fig. 1).

Regarding claim 11, Van Diggelen et al (abstract, figs. 1, 5; col. 3, lines 1-col. 4, lines 47; col. 5, lines 20-col. 6, lines 47; col. 7, lines 26-28) disclose the system for distributing satellite navigation data, comprising:

a plurality of reference stations (fig. 1) for processing satellite signals to receive a respective plurality of satellite navigation data streams and forming packets in response to said plurality of satellite navigation data streams to generate a plurality of packetized satellite navigation data streams (col. 3, 4, 5); and

a processing system for receiving each of said plurality of packetized satellite navigation data streams (see rejection of claim 1), removing duplicate packets within said plurality of packetized satellite navigation data streams to generate a combined packet stream, decoding satellite navigation data within said combined packet stream to generate at least one of ephemeris data, almanac data, ionosphere data, universal time offset data, satellite health data, and raw data bits (abstract, figs. 1, 5; col. 3, lines 1-col. 4, lines 47; col. 5, lines 20-col. 6, lines 47; col. 7, lines 26-28), and sending (fig. 1, lines 41-46) said combined packet stream into a communication network.



*That is ephemeris data and other data are first transmitted as a stream of packets by the satellites to the reference stations. After receiving the transmitted packets, the reference stations each combines its own received packets in internet format (i.e. use IP or the internet communication technology) to forward or transmit the packets to a processing system. The processing system removes duplicate packets from the packets forwarded by the reference stations to provide latest ephemeris data. That is, the processing station after removing duplicate packets decodes the received packets to provide ephemeris data. The decoded ephemeris data are further combined as another packet stream using IP or the internet communication technology for transmission to mobile receivers. The mobile receivers use ephemeris data transmitted by the processing system to aid the mobile receivers.*

Regarding claim 14, Van Diggelen et al (abstract, figs. 1, 5; col. 3, lines 1-col. 4, lines 47; col. 5, lines 20-col. 6, lines 47; col. 7, lines 26-28) disclose the system of claim 11, wherein said plurality of satellite navigation data streams comprises global positioning system (GPS) satellite navigation messages, and wherein each of said packets includes a sub-frame of said GPS satellite navigation messages.

Regarding claim 15, Van Diggelen et al (abstract, figs. 1, 5; col. 3, lines 1-col. 4, lines 47; col. 5, lines 20-col. 6, lines 47; col. 7, lines 26-28) disclose the system of claim 14, wherein each of said packets includes a header having a satellite identifier and a time-of-week (TOW) value.

Regarding claim 16, Van Diggelen et al (abstract, figs. 1, 5; col. 3, lines 1-col. 4, lines 47; col. 5, lines 20-col. 6, lines 47; col. 7, lines 26-28) disclose the system of claim 15, wherein each of said duplicate packets is removed in response to said satellite identifier and said TOW value associated therewith.

Regarding claim 17, Van Diggelen et al (abstract, figs. 1, 5; col. 3, lines 1-col. 4, lines 47; col. 5, lines 20-col. 6, lines 47; col. 7, lines 26-28) disclose the system of claim 11, wherein said processing system comprises a hub, and the system further comprises: a position location server for receiving said combined packet stream.

Regarding claim 20, Van Diggelen et al (abstract, figs. 1, 5; col. 3, lines 1-col. 4, lines 47; col. 5, lines 20-col. 6, lines 47; col. 7, lines 26-28) disclose an apparatus for distributing satellite navigation data, comprising:

means for processing satellite signals at each of a plurality of reference stations to receive a respective plurality of satellite navigation data streams (fig. 1);

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means for forming packets in response to said plurality of satellite navigation data streams to generate a plurality of packetized satellite navigation data streams; means for sending each of said plurality of packetized satellite navigation data streams to a processing system (see rejection of claim 1);

means for removing, at said processing system, duplicate packets within said plurality of packetized satellite navigation data streams to generate a combined packet stream (see rejection of claim 1);

means for decoding satellite navigation data within said combined packet stream to generate ephemeris data, after removing duplicates (abstract, figs. 1, 5; col. 3, lines 1-col. 4, lines 47; col. 5, lines 20-col. 6, lines 47; col. 7, lines 26-28),

means for sending (col. 4, lines 41-47) said combined packet stream into a communication network (abstract, figs. 1, 5; col. 3, lines 1-col. 4, lines 47; col. 5, lines 20-col. 6, lines 47; col. 7, lines 26-28).

*That is ephemeris data and other data are first transmitted as a stream of packets by the satellites to the reference stations. After receiving the transmitted packets, the reference stations each combines its own received packets in internet format (i.e. use IP or the internet communication technology) to forward or transmit the packets to a processing system. The processing system removes duplicate packets from the packets forwarded by the reference stations to provide*

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*latest ephemeris data. That is, the processing station after removing duplicate packets decodes the received packets to provide ephemeris data. The decoded ephemeris data are further combined as another packet stream using IP or the internet communication technology for transmission to mobile receivers. The mobile receivers use ephemeris data transmitted by the processing system to aid the mobile receivers.*

Regarding claim 21, Van Diggelen et al (abstract, figs. 1, 5; col. 3, lines 1-col. 4, lines 47; col. 5, lines 20-col. 6, lines 47; col. 7, lines 26-28) disclose the method of claim 1, wherein removing further comprises removing some of the packets if some of the packets carrying some of the plurality of subframes carrying different portions of the ephemeris data or the another plurality of subframes carrying different portions of the almanac from the one of the plurality of satellite navigation streams are duplicate and retaining remaining packets carrying a remainder of the plurality of subframes carrying different portions of the ephemeris data or the another plurality of subframes carrying different portions of the almanac data from the one of the plurality of satellite navigation streams.

Regarding claim 22, Van Diggelen et al (abstract, figs. 1, 5; col. 3, lines 1-col. 4, lines 47; col. 5, lines 20-col. 6, lines 47; col. 7, lines 26-28) disclose the method of claim 1, wherein removing further comprises removing a duplicate packet carrying the different portion of the almanac.

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Regarding claim 23 Van Diggelen et al (abstract, figs. 1, 5; col. 3, lines 1-col. 4, lines 47; col. 5, lines 20-col. 6, lines 47; col. 7, lines 26-28) disclose the method of claim 1, further comprising:

decoding satellite navigation data within said combined packet stream to generate satellite data.

Regarding claim 24, Van Diggelen et al (abstract, figs. 1, 5; col. 3, lines 1-col. 4, lines 47; col. 5, lines 20-col. 6, lines 47; col. 7, lines 26-28) disclose the method of claim 23, wherein said satellite data comprises at least one of ephemeris data, almanac data, ionosphere data, universal time offset data, satellite health data, and raw data bits.

Regarding claim 25, Van Diggelen et al (abstract, figs. 1, 5; col. 3, lines 1-col. 4, lines 47; col. 5, lines 20-col. 6, lines 47; col. 7, lines 26-28) disclose the method of claim i, wherein each subframe carries no more than 300 bits.

Regarding claim 26, Van Diggelen et al (abstract, figs. 1, 5; col. 3, lines 1-col. 4, lines 47; col. 5, lines 20-col. 6, lines 47; col. 7, lines 26-28) disclose the method of claim i, wherein removing further comprises removing a duplicate packet carrying the different portion of the ephemeris data, while retaining the rest of the plurality of packets that carry the different portions of the ephemeris data for the one of the satellite navigation data streams.

Regarding claim 27, Van Diggelen et al (abstract, figs. 1, 5; col. 3, lines 1-col. 4, lines 47; col. 5, lines 20-col. 6, lines 47; col. 7, lines 26-28) disclose the

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system of claim ii, wherein said processing system includes a processor for decoding satellite navigation data within said combined packet stream to generate satellite data.

Regarding claim 28, Van Diggelen et al (abstract, figs. 1, 5; col. 3, lines 1-col. 4, lines 47; col. 5, lines 20-col. 6, lines 47; col. 7, lines 26-28) disclose the system of claim 12, wherein said satellite data comprises at least one of ephemeris data, almanac data, ionosphere data, universal time offset data, satellite health data, and raw data bits.

### ***Response to Argument***

3. Applicant's arguments filed 1/30/09 have been fully considered but they are not persuasive.

Applicant argues that the prior art the “ephemeris data” occurs prior to “removing ..... duplicate packets”. The examiner respectfully disagrees and notes that ephemeris data in the prior art occur both before and after the removal of duplicate packets. That is ephemeris data and other data are first transmitted as a stream of packets by the satellites to the reference stations. After receiving the transmitted packets, the reference stations each combines it own received packets in internet format (i.e. use IP or the internet communication technology) to forward or transmit the packets to a processing system. The processing system removes duplicate packets from the packets forwarded by the reference stations to provide latest ephemeris data. That is, the processing station after removing duplicate

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packets decodes the received packets to provide ephemeris data. The decoded ephemeris data are further combined as another packet stream using IP or the internet communication technology for transmission to mobile receivers. The mobile receivers use ephemeris data transmitted by the processing system to aid the mobile receivers. Therefore, in the prior art, the ephemeris data occurs before and after the removal of duplicate packets. It believed that the prior art still reads on the claims as in the examiner's answer.

The applicant argues that the prior art VanDiggelen does not disclose “removing, at said processing system, duplicate packets within said plurality of packetized satellite navigation data streams to generate a combined packet stream; and sending said combined packet stream into a communication network.”

The examiner respectfully disagrees and notes that Van Digdelen anticipates “removing, at said processing system 128, duplicate packets (col. 3, lines 40-46) within said plurality of packetized satellite navigation data streams to generate a combined packet stream; and sending (col. 3, lines 40-65, fig. 1) said combined packet stream into a communication network (fig. 1).” The applicant specifically argues that the prior art fails to teach a combined packet stream. The examiner respectfully disagrees. First in the response submitted 7/17/06 applicant admitted at page 4, sections 0013, 0014, that data transmitted over the Internet using internet

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protocol are in (IP) packets, in other words a combined packet stream or combined stream of packets. The applicant further states that the act of removing duplicates automatically forms a combined packet stream, applicants specification sections 0013-0015. By the same token, the prior art plurality of reference stations 104 collect and process satellite data as ephemeris data (which are in packets). The data is sent to a central processor 108 where duplicates of the ephemeris data are removed (col. 3, lines 31-47). After removal, the data are sent over the internet to mobile users. Therefore, the data sent over the internet using IP protocol are combines (IP) packets (col. 4, lines 16-39). These packets sent over the internet are a combination of packets which are NOT duplicates of each other (col. 3, lines 31-47). The prior art specifically states that the ephemeris data is a 900 bit packet data. The prior art further states that the duplicates of the 900 bit packet data are removed. The prior art further states that the ephemeris (900 bit packets) are processed to compute pseudo range, pseudo range rate, Doppler frequency offset, etc, including removal of duplicates (col. 5, lines 20-54). After the duplicates are removed, the pseudo range models are packed (col. 6, lines 46-48) again and redistributed over the Internet as combined packets.

Applicant's quotations and citations from the prior art clearly indicate applicant's admission that the prior art anticipates the claims.



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Applicant's argument that the claimed invention is drawn to the limitation, "removes without extracting satellite data" is unsupported in the claims. It is not clear what all is meant and encompassed by "removes without extracting satellite data". The meets and bounds of the limitation cannot be ascertained since it is understood that removal and extraction refer to the same process. The sections in Van Diggelen that read on the rest of the claims have been provided above.

### *Communication*

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RONNIE MANCHO whose telephone number is (571)272-6984. The examiner can normally be reached on Mon-Thurs: 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tran Khoi can be reached on 571-272-6919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. M./

Examiner, Art Unit 3664

/Ronnie Mancho/

Examiner, Art Unit 3664